DROPSHORE

www.dropshore.com

DROPSHORE SHORING SYSTEM USER MANUAL

SETTING DROPSHORE

SET DROPHEAD TO LOCKED POSTION WITH A HAMMER BLOW TO THE LOCKING NUT. ADJUST POST SHORE TO PROPER PIN HOLE POSITION AND SPIN ADJUSTMENT NUT TO APPROXIMATE HEIGHT POSITION.

START BY SETTING 4 POSTS IN A BOX USING TRIPODS FOR SUPPORT. USE LUMBER WEDGE CLAMPS TO DIAGONALLY BRACE POST SHORES IN TWO DIRECTIONS. SET THE MAIN BEAMS BY ENGAGING ONE END OF THE BEAM ON THE DROPHEAD OF THE SET POST, THEN ENGAGE THE OTHER END OF THE BEAM ON THE DROPHEAD OF THE POST BEING SET.

AS MAIN BEAMS ARE SET IN PARALLEL ROWS, SET THE SECONDARY BEAMS TO THE APPROPRIATE SPACING. THE FRAMING IS NOW READY TO BE DECKED WITH PLYWOOD.

AFTER AREAS ARE FRAMED UP AND ADEQUATELY BRACED PLYWOOD DECKING IS READY TO BE APPLIED.

PLEASE REFER TO THE SAFETY SECTION FOR ADDITIONAL INFORMATION REGARDING THE SAFE AND PROPER USEAGE OF THE POST SHORES AND BEAMS.

PLYWOOD DECKING

A UNIT OF PLYWOOD CAN BE CAREFULLY PLACED ON SHORING THAT IS PROPERLY BRACED. INDIVIDUAL SHEETS CAN THEN BE PLACED AND A FEW 6 PENNY NAILS ARE USED TO SECURE PLYWOOD TO BEAM NAILERS.

LUMBER FILLERS

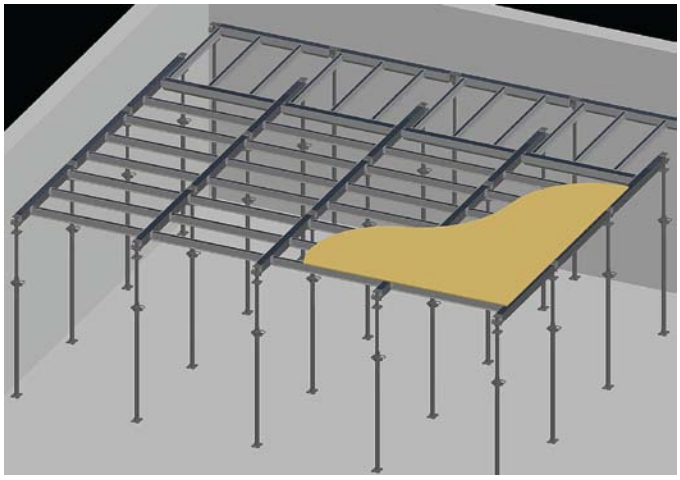
USE 4X4 LUMBER TO FILL IN SPACES WHERE A STD BEAM WILL NOT FIT. THE LEDGER OF THE MAIN BEAM WHERE THE LUMBER IS SUPPORTED IS SET DOWN 3-1/2".

REFER TO THE STD. DRAWING AND SAFETY SECTIONS FOR MORE INFORMATION REGARDING SAFE USEAGE OF LUMBER FILLERS.

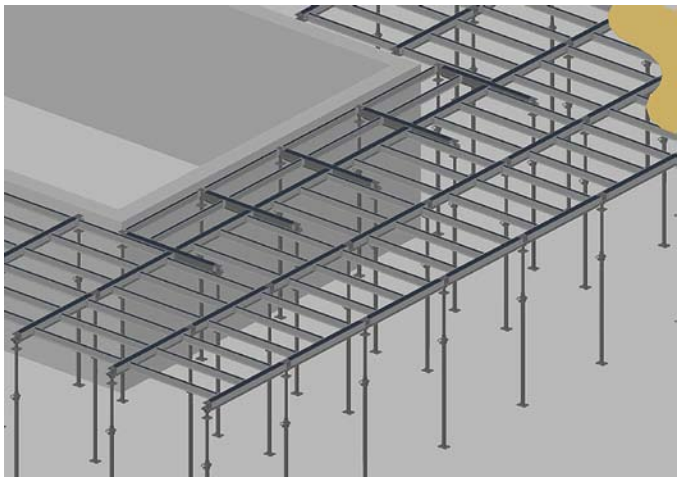
SHORING AROUND COLUMNS

SHORE AROUND COLUMNS AND OTHER OBSTACLES BY 'STRADDLING' THE COLUMN WITH MAIN BEAMS AND BRIDGING THE GAP WITH LUMBER FILLERS.

ADJUSTING RUNS OF SHORING



WHEN ENCOUNTERING A WALL PERPENDICULAR TO THE MAIN BEAMS, ADJUSTING THE LENGTH OF THE SHORING IS EASILY ACCOMPLISHED USING THE **'TURN AND SLIDE'** METHOD. STOP THE SHORING SHORT OF THE WALL, TURN MAIN BEAMS TO RUN PARALLEL TO THE WALL AND SLIDE THE MAIN BEAMS UP TO THE WALL. YOU HAVE INFINATE ADJUSTMENT.



WHEN ENCOUNTERING A WALL PARALLEL WITH THE MAIN BEAMS, ADJUSTING THE SHORING LATERALLY IS EASILY ACCOMPLISHED USING THE **'FINGERING-IN'** METHOD. AT THE OBSRTUCTION TURN MAIN BEAMS TO RUN PERPENDICULAR TO THE OBSTRUCTION AND SLIDE UP TO THE WALL. YOU HAVE INFINATE ADJUSTMENT.

ELEVATION CHANGES

BECAUSE THE 'FRAMEWORK' OF THE SHORING IS 'OPEN', SLAB ELEVATION CHANGES ARE EASILY ACCOMPLISHED BY LAPPING THE LOWER SHORING UNDER THE HIGHER SHORING. THE POST SHORES FOR THE HIGHER ELEVATION CAN PASS THROUGH THE LOWER SHORING. THIS CANNOT BE DONE WITH A PANALIZED SYSTEM.

CALTILEVERING

CANTILEVERING A WALKWAY IS TYPICALLY DONE WITH THE LONGER 11-6 MAIN BEAMS. THE LONGER MAIN BEAM CAN BE CANTILEVERED TO 30 IN. PAST THE SLAB EDGE. THE INBOARD END OF THE BEAM IS SECURED WITH A SAFETY CATCH, WHILE A GUARDRAIL POST ATTACHES TO THE OUTBOARD END.

REFER TO THE SAFETY SECTION FOR MORE INFORMATION REGARDING SAFE USEAGE.

BRACING

BRACING FOR LATERAL STABILITY IS EASILY SET WITH THE USE OF WEDGE CLAMPS AND LUMBER. BRACING IN TWO DIRECTIONS ESPECIALLY AROUND THE PERIMETER STABILIZES THE SHORING.

THE WEDGE CLAMPS CAN ALSO BE USED FOR HORIZONTAL LACING TO INCREASE POST CAPACITY.

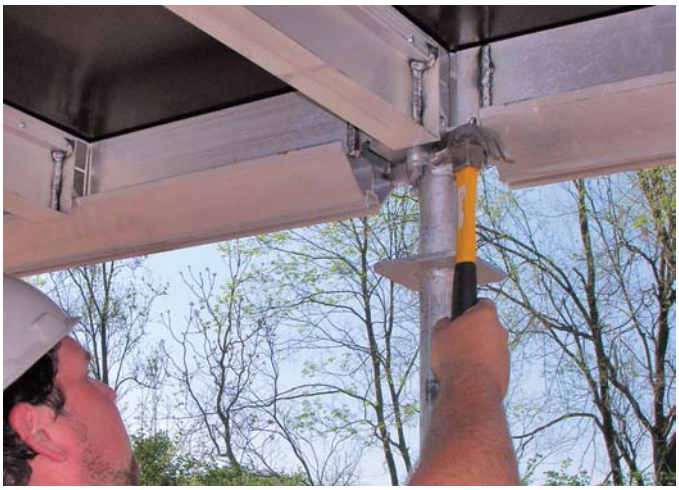
REFER TO THE SAFETY SECTION AND STD. DETAIL FOR MORE INFORMATION ON BRACING PROCEDURES.

STRIPPING THE FRAMEWORK

TO STRIP THE ALUMINUM BEAMS, STRIKE THE LOCK NUT TO RELEASE THE DROPHEAD. THIS ALLOWS THE BEAMS TO DROP 4 INCHES FROM THE PLYWOOD DECKING WITHOUT LOWERING THE POST SHORE.

THE BEAMS CAN NOW BE REMOVED AND STACKED BACK IN THE STORAGE RACKS FOR USE AT THE NEXT LEVEL. THE DROPHEAD IS THE KEY FEATURE THAT ALLOWS THE POST SHORE TO CONTINUOUSLY SUPPORT THE DECK.

REFER TO THE SAFETY SECTION AND CONSULT A STRUCTURAL ENGINEER FOR EARLY BEAM REMOVAL APPROVAL.



RESHORE

WITH THE ALUMINUM BEAMS STRIPPED AND MOVED TO THE NEXT POUR, THE UNDISTURBED POSTS ARE LEFT IN PLACE AS RESHORE. THIS ALLOWS FOR FAST AND SAFE POURING CYCLES.

REFER TO THE SAFETY SECTION AND CONSULT WITH A STRUCTURAL ENGINEER FOR SAFE RESHORE PROCEDURES.

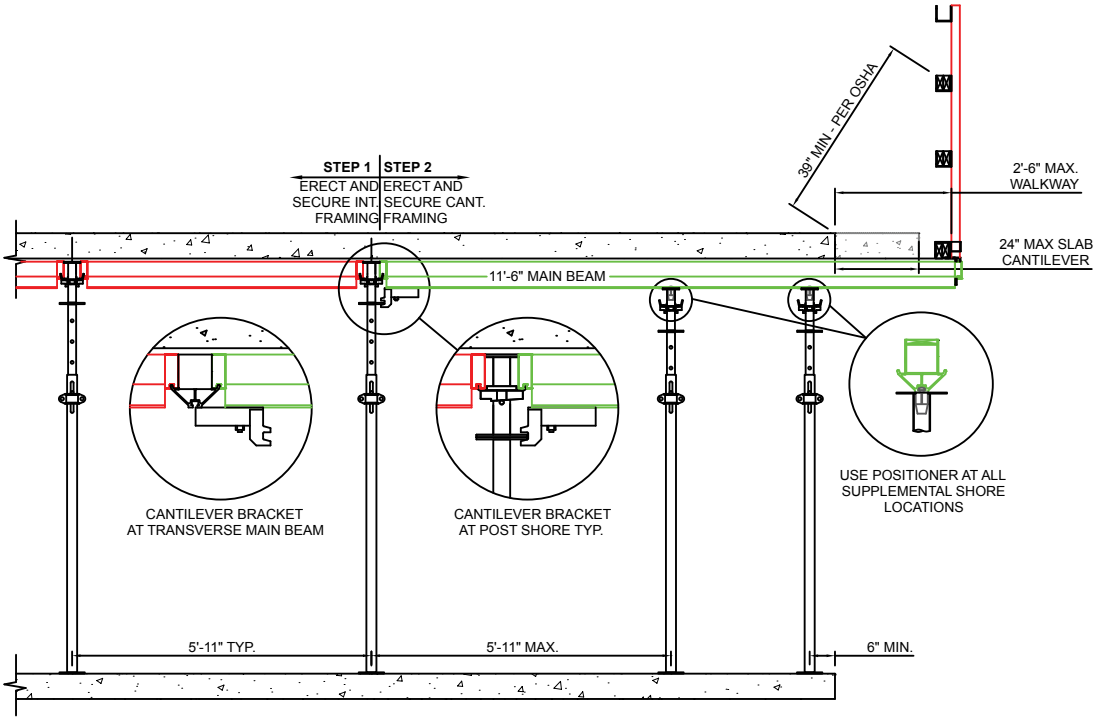
MATERIAL HANDLING

ALL DROPSHORE MATERIAL IS STORED AND SHIPPED IN STACKING RACKS FOR MAXIMUM EFFICIENCY. THE STACKING RACKS CAN EASILY BE CONVERTED INTO BOXES FOR STORAGE OF THE SMALLER ACCESSORIES.

STORAGE, TRUCK LOADING AND JOBSITE HANDELING ARE SIMPLIFIED WITH THE STACKING RACK, AS THEY CAN BE MOVED WITH A FORKTRUCK OR CRANE. ONCE ONSITE, CASTER WHEELS CAN BE ADDED TO THE RACKS FOR ADDED MOBILITY.

REFER TO THE SAFETY SECTION AND SHIPPING SECTION FOR MORE INFORMATION REGARDING SAFE USEAGE AND STANDARD RACKING PROCEDURES.

TYPICAL CANTILEVER DETAIL



TYPICAL CANTILEVERED PERIMETER W/ 11'-6" MAIN BEAM

NOTES:

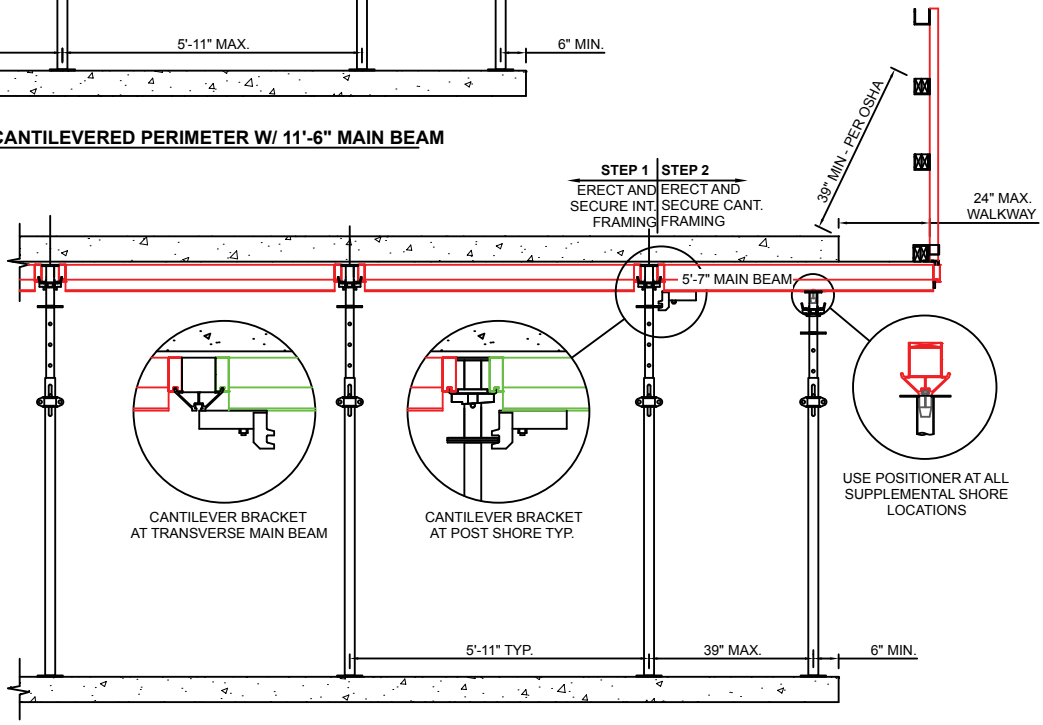
1. EXTRA CAUTION MUST BE EXERCISED AT CANTILEVERED CONDITIONS TO AVOID FALL HAZARDS. WARN ALL PERSONNEL ON JOBSITE TO STAY OFF CANTILEVERED AREAS UNTIL INSTALLATION AND FALL PROTECTION IS COMPLETE.

2. AVOID LOADING CANTILEVERED MAIN BEAM PRIOR TO INSTALLING ALL SECONDARY BEAMS, POST SHORES, POSITIONERS, SAFETY CATCHES, CROSS BRACING, LACING AND ADJECENT PLYWOOD.

3. AVOID CANTILEVERING MAIN BEAMS WHERE ADJACENT FRAMING/PLYWOOD IS NOT SUFFICIENT TO BALLAST LOADS AT CANTILEVER.

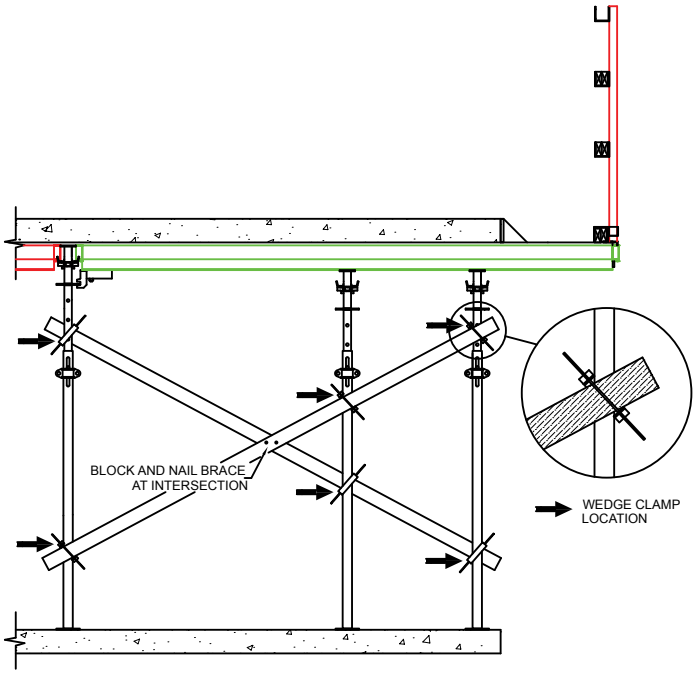
4. AVOID POST SHORES UNDER MAIN BEAMS WITHOUT POSITIONERS.

5. AVOID LOADING CANTILEVER BEYOND ITS DESIGN CAPACITY.

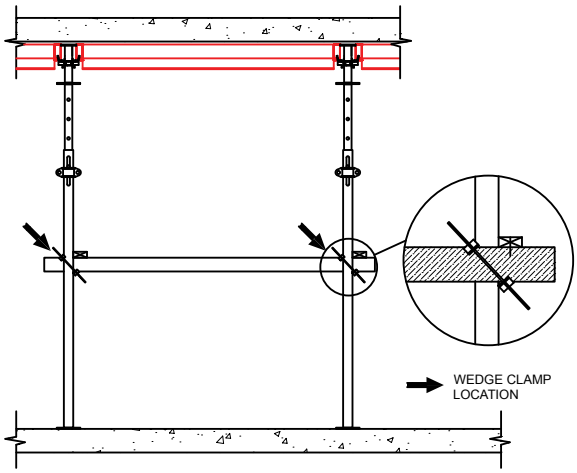


TYPICAL CANTILEVERED PERIMETER W/ 5'-7" MAIN BEAM

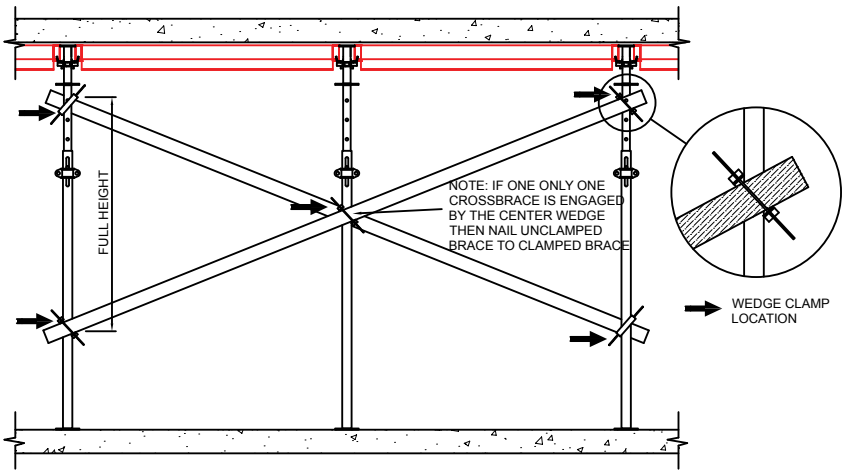
TYPICAL BRACING AND LACING DETAIL



TYPICAL PERIMETER BRACING



TYPICAL LACING DETAIL



TYPICAL INTERIOR BRACING

NOTES:

1. USE 2X4 LUMBER FOR BRACING.
2. CROSS BRACES MUST SPAN AT LEAST 3 POST SHORES.
3. CROSS BRACES MUST BE INSTALLED FULL HEIGHT - TOP OF ONE SHORE TO BOTTOM OF OTHER.
4. CROSS BRACES MUST BE SECURED WITH WEDGE CLAMPS AT ALL INDICATED LOCATIONS.
5. SEE LACING DETAIL FOR POST SHORE LACING.

CROSS BRACE GUIDELINES:

1. SET CROSSBRACING AT ALL EXTERIOR AND INTERIOR POUR BOUNDARIES, THE PERIMETER OF LOADING AREAS, AND ALL BEAM LOCATIONS.
2. CROSSBRACING MUST BE SET EVERY OTHER ROW OF SHORES IN BOTH DIRECTIONS AT A MINIMUM.
3. CROSSBRACING ALONG WALL IS NOT A REQUIREMENT.
4. ADDITIONAL CROSSBRACING IS REQUIRED ON SLOPES AND RAMPS.

TYPICAL SAFETY POST AND LUMBER FILLER BEAM DETAIL

NOTES:

1. PRECAUTIONS MUST BE TAKEN WHILE INSTALLING SAFETY POST AND GUARDRAIL TO PREVENT FALL HAZARDS.

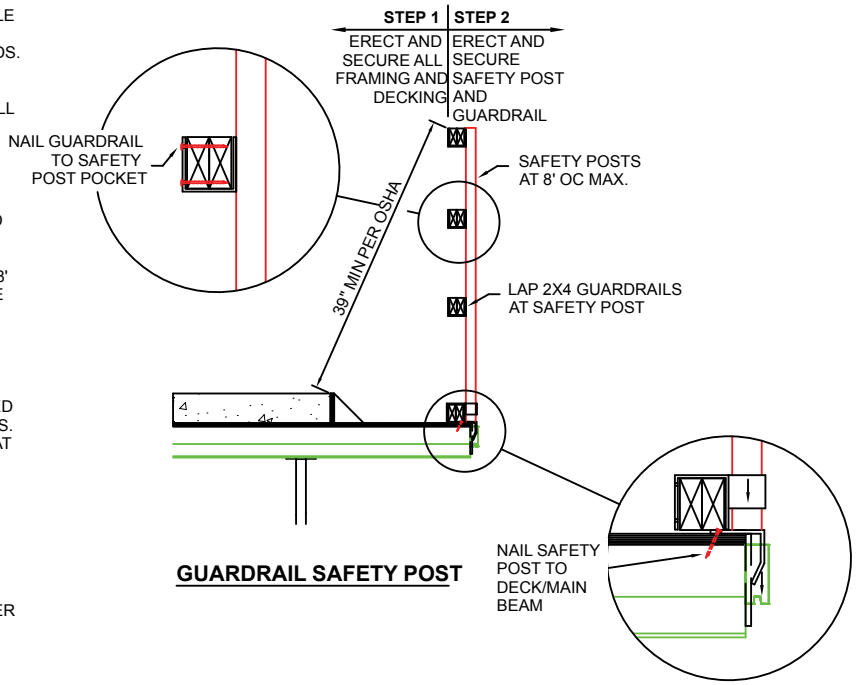
2. NO PERSONNEL ALLOWED ON DECK UNTIL SHORING INSTALLATION AND FALL PROTECTION IS COMPLETE AND INSPECTED BY A SAFETY MANAGER. COMPLETE SHORING INSTALLATION INCLUDES ALL NECESSARY CROSS BRACING/LACING, SAFETY CATCHES, POST SHORES AND POSITIONERS, AND DECKING.

3. SAFETY POSTS MUST NOT EXCEED 8' OC SPACING. SAFETY POSTS MUST BE FULLY SEATED INTO MAIN BEAM END CAP AND NAILED TO DECKING / MAIN BEAM TO PREVENT UPLIFT.

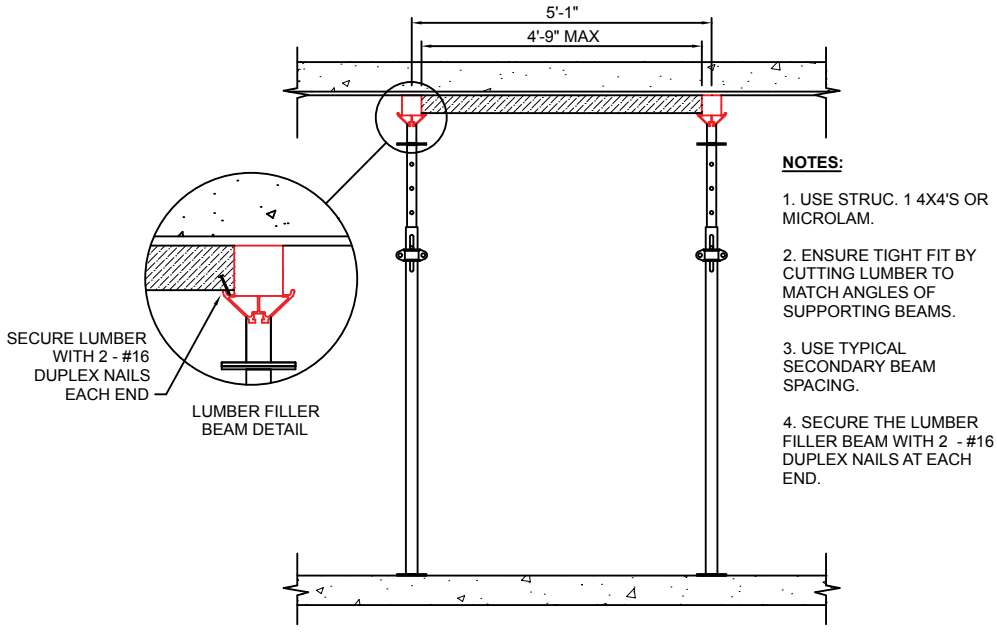
4. GUARDRAILS MUST BE MADE FROM 2X4'S. GUARDRAILS MUST BE SECURED TO SAFETY POST POCKETS WITH NAILS. LAPPING OF 2X4'S MUST TAKE PLACE AT THE SAFETY POST.

5. ALL WALKWAY AREAS MUST BE DECKED AND HAVE FALL PROTECTION INSTALLED.

6. IN THE EVENT THAT DROPSHORE SAFETY POSTS CANNOT BE USED BECAUSE OF JOB CONDITIONS, PROPER OSHA APPROVED FALL PROTECTION MUST BE INSTALLED AND USED BY CONTRACTOR.



GUARDRAIL SAFETY POST



NOTES:

1. USE STRUC. 1 4X4'S OR MICROLAM.

2. ENSURE TIGHT FIT BY CUTTING LUMBER TO MATCH ANGLES OF SUPPORTING BEAMS.

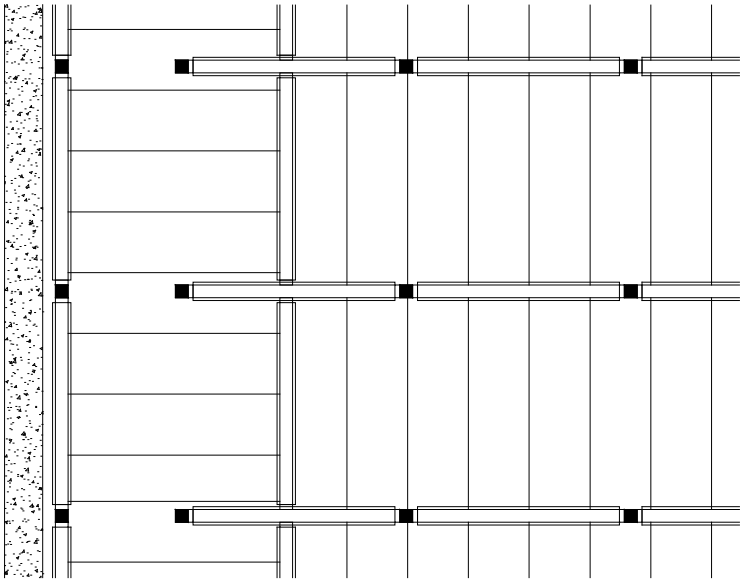
3. USE TYPICAL SECONDARY BEAM SPACING.

4. SECURE THE LUMBER FILLER BEAM WITH 2 - #16 DUPLEX NAILS AT EACH END.

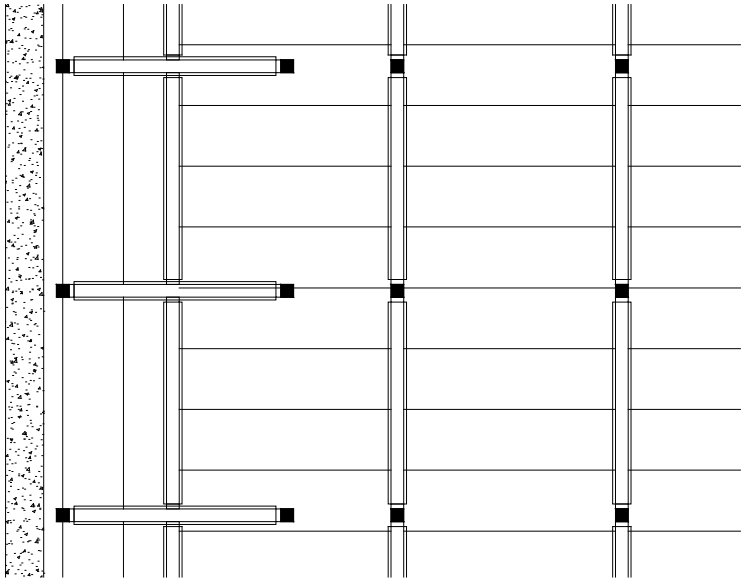
TYPICAL LUMBER FILLER BEAM

TYPICAL DETAILS

LEGEND	
#3 PROP ■	LOW PROP W/ POSITIONER ◙
#4 PROP □	
#5 PROP ⊠	
11'-6" MAIN BEAM	
5'-7" MAIN BEAM	
3'-9" MAIN BEAM	
5'-7" SECONDARY BEAM	
WOOD FILLER	
NOTE: GRAYED OUT BEAMS AND POSTS ARE AT LOWER ELEVATION THAN TYPICAL DECK.	
SAFETY CATCHES	(AT ALL CANTILEVER CONDITIONS)
POSITIONER	(AT ALL SUPPLEMENTAL SHORE LOCATIONS)



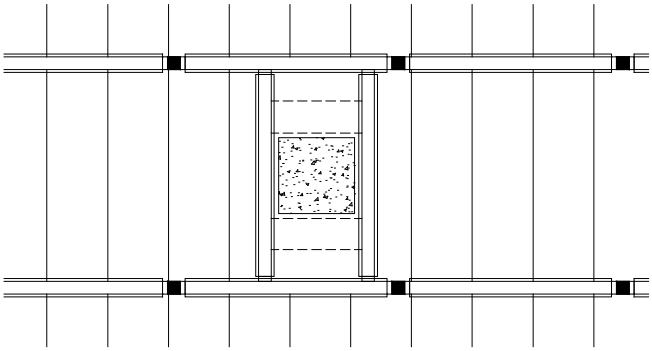
TYPICAL TURN AND SLIDE DETAIL



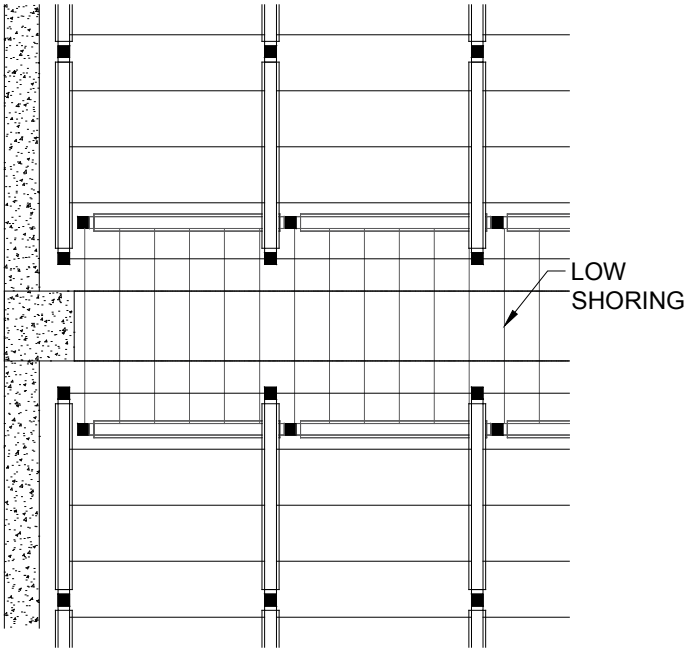
TYPICAL FINGER-IN DETAIL

TYPICAL DETAILS

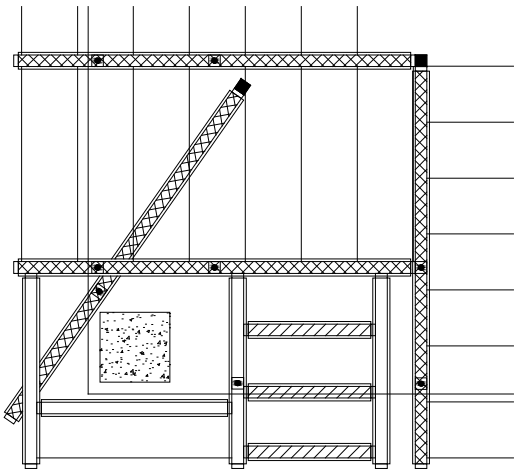
LEGEND			
#3 PROP	■	LOW PROP W/ POSITIONER	◘
#4 PROP	□		
#5 PROP	⊠		
11'-6" MAIN BEAM			
5'-7" MAIN BEAM			
3'-9" MAIN BEAM			
5'-7" SECONDARY BEAM			
WOOD FILLER			
NOTE: GRAYED OUT BEAMS AND POSTS ARE AT LOWER ELEVATION THAN TYPICAL DECK.			
SAFETY CATCHES	(AT ALL CANTILEVER CONDITIONS)		
POSITIONER	(AT ALL SUPPLEMENTAL SHORE LOCATIONS)		



TYPICAL SHORING AROUND COLUMN



TYPICAL SHORING UNDER BEAM



TYPICAL OUTSIDE CORNER DETAIL

POST SHORES:

- Post shores must be installed completely vertical, use level to verify.
- Cross bracing must be installed as shores and framing are being erected.
- Post shores used as reshoring must be secured by using spring clips, cross-bracing or other appropriate methods to prevent a falling material hazard.
- Special precautions must be taken when shoring off of, or up to a sloping surface.
    - Additional cross braces must be installed to stabilize framing.
    - Lumber wedges must be installed under the base plate to gain adequate bearing when shoring from sloped surfaces.
    - The Dropshore system should not be used to support sloping slabs exceeding 6% of level grade.
- Ensure the Drophead ledger plate is in the up position, and that the disk wedge is fully engaged.
- When beams require mid-span support (i.e. cantilevered beam conditions, heavy loads etc.), Post Positioners must be used to ensure concentric loading and post shore stability.
- The Dropheads must be secured with two – grade 5 bolts and nuts.
- The Dropshore Extender must be secured to the #3 Dropshore Post with four – grade 5 bolts and nuts. The extender is only to be used with the #3 Post Shore. Lacing must be used when the extender is in use.

CROSS BRACING AND LACING:

- Use 1x4 or 2x4 lumber for bracing.
- Cross braces must connect at least 3 post shores, installed from the top of the first shore to the bottom of the third shore in a diagonal fashion.
- Cross braces must be set every other row of shores in both directions as a minimum requirement.
- Set cross bracing at all exterior and interior pour boundaries, the perimeter of loading areas, and all beam locations.
- Cross bracing along a wall is not a requirement.
- Additional cross bracing is required on slopes and ramps.
- Horizontal lacing at mid-height of the shore in two directions can significantly increase the shores capacity. This may be necessary when post shores are extended near capacity.

HORIZONTAL SHORING:

- All Main and Secondary Beams should be inspected for damage before use. This includes bends, dents, cuts, damaged end caps, broken welds, and missing or loose nailers. These beams must be culled out for repair.
- The bearing ends of the Main & Secondary Beams must be securely seated in the Drophead ledger plate or Main Beam ledger prior to placing loads on members.
- When 4x4's are used as secondary beams, ensure that:
    - A structural engineer has reviewed the conditions and approved their use.
    - Full bearing is achieved on the Main Beam ledger.
    - Nails are used to prevent the 4X from dislodging.
    - See the 'Lumber Beam Span Chart' for spacing information.
- When beams require mid-span support (i.e. cantilevered beam conditions, heavy loads etc.), Post Positioners must be used under Main Beams to ensure concentric loading and post shore stability.
- Early Beam Removal
    - Refer to the Dropshore 'Early Beam Removal Criteria' table for minimum requirements.
    - Early beam removal is subject to a structural engineer's approval.
    - The Drophead feature must be used to remove beams and post shores must remain undisturbed during this process.

CANTILEVERED CONDITIONS:

- Extra caution must be exercised at cantilevered conditions to avoid fall hazards. Warn all personnel on jobsite to stay off cantilevered areas until installation and fall protection is complete.
- Avoid loading cantilevered main beams prior to installing all secondary beams, post shores, positioners, safety catches, cross bracing, lacing and plywood decking (adjacent to cantilevered areas).
- Do not cantilever main beams where the adjacent framing and plywood decking is not sufficient to counter the cantilever loads.
- Avoid loading the cantilevered main beam beyond its design capacity.
- Safety Catches must be installed where cantilevered beam conditions exist to prevent uplift. Install Safety Catches prior to loading cantilevered members.
- Never place materials and/or equipment on cantilevered framing.
- Install adequate cross bracing to stabilize cantilevered conditions.
- When beams require mid-span support (i.e. cantilevered beam conditions, heavy loads etc.), Post Positioners must be used under Main Beams to ensure concentric loading and post shore stability.

SAFETY POST AND GUARDRAIL:

- Precautions must be taken while installing safety post and guardrail to prevent fall hazards.
- No personnel allowed on deck until shoring installation and fall protection is complete and inspected by a safety manager. Complete shoring installation includes all necessary cross bracing/lacing, safety catches, post shores, positioners, and decking.
- Safety posts must not exceed 8'oc spacing. Safety posts must be fully seated into Main Beam end cap and nailed to decking / Main Beam to prevent uplift.
- Guardrails must be made from 2x4's minimum. Guardrails must be secured to Safety Post pockets with nails or screws. Lapping of 2x4's must take place at the Safety Post.
- All walkway areas must be decked and have full fall protection.
- In the event that Dropshore Safety Posts cannot be used because of job conditions, proper OSHA approved fall protection must be installed and used by the contractor.
- Contractor must ensure that all fall protection is installed in accordance with local OSHA rules and regulations.

EQUIPMENT CARE:

- Never drop HV equipment.
- Never allow Post Shore inner tube to slam downward when stripping.
- Continually remove excess concrete build-up.
- Never strike aluminum framing members or post shores with a hammer, stripping bar etc.
- Always inspect equipment during installation. Cull out equipment that is bent, dented or has cracked welds or other abnormalities for inspection by the manufacturer.

STACKING RACKS:

- When moving racks with a forklift or a crane, **MOVE ONLY 1 RACK AT A TIME TO PREVENT INSTABILITY AND RACK DAMAGE**.
- Only use stacking racks for handling and transporting Dropshore equipment. **THE USE OF STACKING RACKS AS MOBILE SCAFFOLDS AND/OR PERSONNEL PLATFORMS IS STRICTLY PROHIBITED**.
- Do not overload stacking racks, review bundling standards to ensure proper rack loading. Stacking racks with wheels are designed to be pushed by hand. **USING MACHINERY TO PUSH OR PULL STACKING RACK IS STRICTLY PROHIBITED**. Wheels must be attached with supplied pin and keeper.
- Ensure bundles are stable before hoisting to avoid falling material hazards.
- Use the following stacking standards to avoid load instability and/or equipment damage:

STACKING RACK SAFETY	
Shipping & Storage (w/o wheels)	**On-Site (w/ wheels)**
Post Shores – 2 Racks High Max.	Post Shores – 1 Rack High Max.
Aluminum Beams – 3 Racks High Max.	Aluminum Beams – 2 Racks High Max

DROPSHORE PARTS LIST			
Description	**Weight (lbs)**	**Full Rack Quantity**	**Full Rack Weight (lbs)**
Main Beam - 3'9"	19	38	788
Main Beam - 5'7"	28	28	850
Main Beam - 11'6"	58	28	1690
Secondary Beam - 3'9"	8	88	770
Secondary Beam - 5'7"	12	64	834
Dropshore #3 w/ Drophead	48	50	2466
Dropshore #4 w/ Drophead	72	40	2880
Dropshore #5 w/ Drophead	92	30	2760
Stacking Rack	74		
Drop Head	10.5		
Guardrail Post	25		
Safety Catch	3.25		
Positioner	0.25		
Wedge Clamp	2.4		
Tripod	24		
Pivot Plate	2.2		
Caster Assembly	16.4		
Caster	12.75		
Caster Plate	3.25		
Caster Plate Pin	0.40		

SHIPPING FROM DROPSHORE YARD:

We will ensure that:

- All Dropshore equipment is bundled properly.
- All Dropshore equipment is in good working order.
- All Dropshore equipment is counted and recorded accurately.

Prior to shipment, a Dropshore Manager will perform the following:

- Verify that all Stacking Racks are bundled properly.
- Verify all Stacking Rack counts for Beams and Post Shores.
- Take pictures of loaded truck with digital camera.
- Review shipping ticket to verify accuracy.

RECEIVING LOADS FROM CUSTOMER:

We will perform the following:

- Count all Dropshore equipment on the truck and provide an accurate return ticket.
- Verify quantities shown on customers shipping ticket (if provided).

Prior to unloading, a Dropshore Manager will review all loads to:

- Verify that all Stacking Racks are bundled properly.
- Verify all Stacking Rack counts for Beams and Post Shores.
- Take digital pictures of the following:
    - The truck prior to unloading.
    - Improperly or partially loaded stacking racks.
    - Damaged equipment (if any).

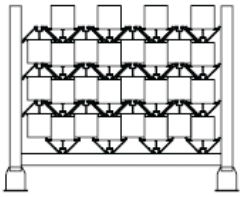
After unloading a return, a Dropshore Manager will:

- Review the return ticket to verify accuracy.
- Perform a thorough check and recount of returned equipment within 10-working days of receiving the return load. Equipment designated as damaged shall be identified, photographed and placed in a holding area for a period of two weeks following notification to the customer.
- Finalized return ticket & damage report shall be forwarded to the customer in a timely fashion following completion of the review.

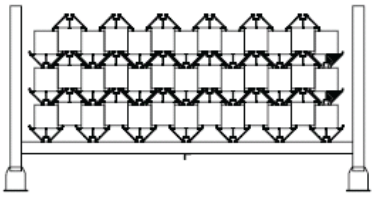
CUSTOMER SHIPPING:

- The customer must verify quantities shipped, both incoming and out-going. If a discrepancy is found, notify the Dropshore office immediately.
- Returned posts and beams must be stacked and banded per the Dropshore bundling standards.
- Do not place racks of Secondary Beams at the end of the trailer. The Secondary Beams may vibrate out of the rack while in transit.
- The customer should provide a shipping ticket with the shipment. A blank shipping ticket can be found at www.dropshore.com/downloads
- Dropshore yard address:
  3550 Round Bottom Road
  Cincinnati, Ohio 45244
  Phone: 513-561-8331
  Shipping/Receiving Hours: 7:30am to 3:00pm EDT

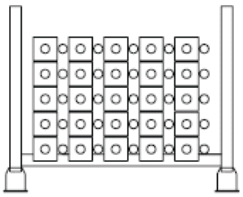
STACKING RACK GUIDELINES



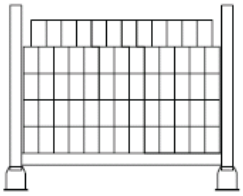
(28) 5'-7" MAIN BEAMS
(28) 11'-6" MAIN BEAMS



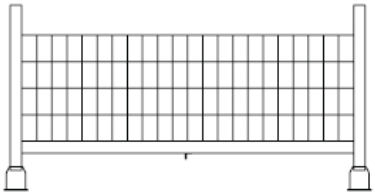
(39) 3'-9" MAIN BEAMS



(50) #3 DROPSHORE POST
(40) #4 DROPSHORE POST
(30) #5 DROPSHORE POST



(64) 5'-7" SEC. BEAMS



(88) 3'-9" SEC. BEAMS

Stacking Rack Safety	
Shipping & Storage (w/o wheels)	**On-Site (w/ wheels)**
Post Shores – 2 Racks High Max.	Post Shores – 1 Rack High Max.
Aluminum Beams – 3 Racks High Max.	Aluminum Beams – 2 Racks High Max

DROPSHORE BEAM SIZES		
Dropshore Beam	**Beam Length**	**Beam Length w/ Drophead**
3-9 Main Beam (1.15 MB)	1.15m (3.77')	1.25m (4.10')
5-7 Main Beam (1.70 MB)	1.70m (5.58')	1.80m (5.91')
11-6 Main Beam (3.50 MB)	3.50m (11.48')	3.60m (11.81')
3-9 Secondary Beam (1.15 SB)	1.15m (3.77')	1.25m (4.10')
5-7 Secondary Beam (1.70 SB)	1.70m (5.58')	1.80m (5.91')

STD. SHORING GRID SIZES		
Beam Combination	**Grid Dimension with Drophead**	**Approximate Area**
5-7 MB x 5-7 SB	1.8m x 1.8m	3.24 m^2 (35 sf)
3-9 MB x 5-7 SB	1.25m x 1.8m	2.25 m^2 (24 sf)
3-9 MB x 3-9 SB	1.25m x 1.25m	1.56 m^2 (17 sf)

BEAM LOAD CAPACITY (PLF)		
Beam	**$\Delta = \ell/360$**	**Δ = 0.25"**
3-9 (1.15m) Main Beam	3800[a]	3800[a]
5-7 (1.70m) Main Beam	1230	1560
3-9 (1.15m) Secondary Beam	1230	1850[a]
5-7 (1.70m) Secondary Beam	375	500

Source: Steven Schaefer Associates, Inc. Consulting Structural Engineers and physical testing conducted at the University of Cincinnati National Test Bridge.
(a.) 3'9" Main Beam exceeds bending capacity prior to reaching l/360 or .25" deflection.

PLYWOOD SUPPORT SPACING (¾" STRUC-1 PLYWOOD)		
Secondary Beam Spacing	**Max. Slab Thickness**	
	Face Grain Parallel to Supports	Face Grain Across Supports
12" o.c.	> 19 to 30" [b]	> 22" to 30" [b]
16" o.c.	> 13" to 19" [a]	> 16" to 22" [b]
19.2" o.c.	> 8" to 13" [a]	> 8" to 16" [a]
24" o.c.	> 0" to 8" [a]	> 0" to 8" [a]

(a.) Secondary beam spacing limited by plywood strength.
(b.) Secondary beam spacing limited by beam strength.

LUMBER BEAM SPAN CHART (USING SPF 4x4)						
Lumber Beam Spacing (in.)	**Slab Thickness**					
	6"	**8"**	**10"**	**12"**	**14"**	**16"**
12	75"	72"	69"	67"	64"	62"
16	70"	67"	63"	61"	59"	57"
19.2	67"	62"	60"	57"	55"	53"
24	62"	59"	56"	x	x	x

Source: National Forest Products Association

DROPSHORE #3 CAPACITY (LBS.)				
	#3 W/ DROPSHORE SYSTEM		#3 USED AS RESHORE	
POST HEIGHT	W/ DROPHEAD NOT LACED 2.5:1 FOS	W/ DROPHEAD LACED 2.5:1 FOS	W/ DROPHEAD NOT LACED 3:1 FOS	W/ DROPHEAD LACED 3:1 FOS
7'-0"	7500*	7500*	7325	7325
7'-6"	7500*	7500*	7325	7325
8'-0"	7500*	7500*	7325	7325
8'-6"	7500*	7500*	7325	7325
9'-0"	7500*	7500*	7325	7325
9'-6"	7500*	7500*	6450	7325
10'-0"	6600	7500*	5500	6875
10'-6"	5850	7300	4875	6075
11'-0"	5200	6500	4325	5400
11'-6"	4400	5500	3650	4550

DROPSHORE #4 CAPACITY (LBS.)						
	#4 W/ DROPSHORE SYSTEM		#4 USED AS RESHORE		#4 USED PLAIN	
POST HEIGHT	W/ DROPHEAD NOT LACED 2.5:1 FOS	W/ DROPHEAD LACED 2.5:1 FOS	W/ DROPHEAD NOT LACED 3:1 FOS	W/ DROPHEAD LACED 3:1 FOS	NO DROPHEAD NOT LACED 3:1 FOS	NO DROPHEAD LACED 3:1 FOS
7'-10"	-	-	-	-	6325	6325
8'-8"	7500*	7500*	6325	6325	6325	6325
9'-0"	7500*	7500*	6325	6325	6325	6325
9'-6"	7500*	7500*	6325	6325	6325	6325
10'-0"	7500*	7500*	6325	6325	6325	6325
10'-6"	7500*	7500*	6325	6325	6325	6325
11'-0"	7500*	7500*	6325	6325	6325	6325
11'-6"	7500*	7500*	6325	6325	5875	6325
12'-0"	7300	7500*	6080	6325	5400	6325
12'-6"	6750	7500*	5625	6325	4900	6325
13'-0"	6200	7500*	5150	6325	4400	5860
13'-6"	5600	7450	4650	6200	3875	5165
14'-0"	5000	6650	4150	5500	3325	4430
14'-6"	4300	5700	3580	4750		

DROPSHORE #5 CAPACITY (LBS.)						
	#5 W/ DROPSHORE SYSTEM		#5 USED AS RESHORE		#5 USED PLAIN	
POST HEIGHT	W/ DROPHEAD NOT LACED 2.5:1 FOS	W/ DROPHEAD LACED 2.5:1 FOS	W/ DROPHEAD NOT LACED 3:1 FOS	W/ DROPHEAD LACED 3:1 FOS	NO DROPHEAD NOT LACED 3:1 FOS	NO DROPHEAD LACED 3:1 FOS
9'-8"	-	-	-	-	7500	7500
10'-6"	7500*	7500*	7500	7500	7500	7500
11'-0"	7500*	7500*	7500	7500	7500	7500
11'-6"	7500*	7500*	7500	7500	7500	7500
12'-0"	7500*	7500*	7500	7500	7500	7500
12'-6"	7500*	7500*	7500	7500	7500	7500
13'-0"	7500*	7500*	7500	7500	7500	7500
13'-6"	7500*	7500*	7500	7500	7500	7500
14'-0"	7500*	7500*	7500	7500	7500	7500
14'-6"	7500*	7500*	7500	7500	7500	7500
15'-0"	7500*	7500*	7500	7500	7500	7500
15'-6"	7500*	7500*	7500	7500	6700	7500
16'-0"	7500*	7500*	7100	7500	6000	7500
16'-6"	7500*	7500*	6350	7500	5300	7050
17'-0"	6800	7500*	5650	7100	4650	6200
17'-6"	6000	7500*	5000	6500	4000	5300
18'-0"	5200	6900	4300	5700	-	-

NOTES:
1. Load chart assumes that drophead is attached to outer tube end of post shore.
2. Load chart assumes concentric loads off of, and up to non-sloping surfaces.
3. Lacing is located at the midpoint of the post shore and continuous in two perpendicular directions.
4. Post shores must be adequately braced for lateral stability.
5. * Post shore capacity is limited to 7500 lbs when used with the Dropshore System (2.5:1 FOS)

MAIN AND SEDCONDARY BEAM PROPERTIES		
Beam Properties (X-axis)	**Main Beam**	**Secondary Beam**
Area (in^2)	4.18	1.33
Ix (in^4)	13.52	4.42
Sx (in^3)	3.78	1.88
Mmax (ft-lbs)	6615	3290
E (psi)	($10.1x10^6$)	($10.1x10^6$)
AL Alloy	6061 T6	6061 T6

Source: Steven Schaefer Associates, Inc. Consulting Structural Engineers

EARLY BEAM REMOVAL CRITERIA			
Slab Thickness	**Min. Req'd fc (PSI)**	**Fc at 4000 PSI**	**Normal Cure (Days)**
4”	2430	61%	7
5”	1230	31%	3
6”	720	18%	2
7”	500*	12%	1
8”	500*	12%	1
9”+	500*	12%	1

1. *Contractor to verify strength prior to stripping.
2. Subject to approval by structural engineer.
3. Max post shore spacing 5’-11” x 5’-11”
4. Max distance post shore can be from slab edge=2’-5”.
5. Post shores remain undisturbed until stripping release.
6. Construction Live Load (50psf)
7. Normal weight concrete (150pcf)
8. Only aluminum framing members and unrestrained plywood can be removed.
9. Normal cure in days is based on standard 28 day curve.

DROPSHORE

www.dropshore.com

JOBSITE CHECKLIST

Date:

Project:

Customer:

Supervisor:

Dropshore Rep:

This jobsite checklist is to help ensure your safe and successful use of the Dropshore Shoring System. If at any time you or your employees have any questions pertaining to the safe usage of the Dropshore System please contact your representative. Please review this checklist with all new employees that will be working with the shoring equipment.

PRIOR TO EQUIPMENT USE:

- ☐ Received and reviewed Dropshore Safety Guidelines and Training Manual.
- ☐ Reviewed shop drawing prior to installation.
- ☐ Visually confirm counts on incoming truck with the packing list. Report any inconsistencies immediately.
- ☐ Review equipment care, receiving, installation, stripping and bundling as outlined in the Dropshore Literature.
- ☐ Review individual Stacking Rack picking weights and stacking requirements as outlined in the Training Manual.
- ☐ Discuss jobsite security to protect equipment from theft (recommend stripping equipment only as needed).
- ☐ Contractor must comply with all applicable State & Federal safety and health regulations.

REVIEW OF SAFETY HIGHLIGHTS:

- ☐ Utilize tripods during initial installation for framing stability.
- ☐ Install shoring equipment from the ground (or from properly constructed scaffold/scissor lift) only.
- ☐ Ensure props are plumb and both the adjustment pin and drophead nut are fully engaged.
- ☐ Always secure cantilevered beams with Safety Catch immediately upon installation.
- ☐ Always use a Positioner with supplemental props.
- ☐ Install required cross-bracing immediately behind framing installation to ensure framing stability.
- ☐ Avoid using hammers to position equipment.
- ☐ Never use Stacking Racks as personnel scaffold.
- ☐ Avoid dropping equipment.
- ☐ Always engage wheel brakes of inactive Stacking Racks, never store Racks on sloped surfaces.
- ☐ Erect framing in strict accordance with shop drawings.
- ☐ Report immediately all drawing discrepancies and structural changes to your Dropshore representative.
- ☐ Never deviate from shop drawings without prior written approval from Dropshore's Engineering Dept.
- ☐ Cull out and tag all damaged equipment, report same to Dropshore representative.
- ☐ Install Reshore clips or lacing to prevent re-shores from dislodging and creating a fall hazard.
- ☐ Other:
- ☐ Other:

Training follow-up required? Y / N. If yes, when_____

☐ Provide supervisor with a copy of completed checklist.

☐ Supervisor Signature_____